DOCUMENT RESUME

ED 141 444 UD 017 047

AUTHOR Wargo, Michael J.
TITLE Those Elusive Components that Contribute to the Success of Compensatory Education Projects.
PUB DATE 4 Apr 77
NOTE 15p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, N.Y., April 4-8, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Compensatory Education Programs; Educationally Disadvantaged; Educational Policy; Formal Criticism; Historical Reviews; *Literature Reviews; Policy Formation; Program Descriptions; *Program Effectiveness; Program Evaluation; *Research Methodology; *Research Problems; *Success Factors

ABSTRACT

This paper traces the history of a series of early studies designed to identify and document unusually successful compensatory education projects. One of the major characteristics of the early studies is that they were based upon review and analysis of existing literature. Although they used similar data bases they varied considerably in methodology. Even the best of them would today be characterized as methodologically primitive. The studies were conducted between 1965 and 1972 and focused on activities such as actual identification of successful compensatory education projects, analyses of the characteristics of successful programs, identification of project components that differentiated successful from unsuccessful projects, follow-up of previously identified successes, and analysis of interstudy agreement. Most of the studies included project identification and analyses of successful program characteristic phases. Several studies focused on the analysis of previously identified successful programs. Only one study attempted to determine if successful programs maintain their status over a period of years. These early studies had important policy implications for federal and state education agencies. They indicated that local compensatory education projects tended to conduct relatively unsophisticated self evaluations or none at all. Another finding of these early studies was that successful projects were not replicated at other unrelated sites. (Author/AM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED141444

Elusive Components that Contribute to Success of Compensatory Education Projects 1/

Michael J. Wargo
Division of Evaluation
ACTION

Shortly after enactment of the Elementary and Secondary Education Act of 1965 the U.S. Office of Education (USOE) and several State Education Agencies began supporting a series of studies designed to identify and document unusally successful compensatory education projects. This flurry of activity was motivated by a desire on the part of Federal and State agencies to provide more practical guidance to local education agencies regarding successful practices than could be provided by existing education research literature. The long term objective of the effort was to encourage local agencies to implement compensatory education programs that had demonstrated some degree of success and thereby maximize the ultimate impact of compensatory education programs on disadvantaged students.

This paper will trace the history of those early studies, critique their methodology, and summarize their results. It will also attempt to demonstrate that those pioneering studies provided a somewhat unsophisticated but logically sound foundation upon which later methodological advances were built. Finally, the impact of the policy guidance provided by those early studies will be summarized.

One of the major characteristics of early identification studies is that they were based upon review and analysis of existing literature. From 1965 through 1972 the majority of the studies dealing with identification of success had that characteristic. One of the first breaks from that mold was the USOE supported Educational Testing Service study of innovative reading programs, described by Dr. Trismen in a following paper.

CG 11047

Although early identification studies used similar data bases, they varied considerably in their method of project idenfication, documentation review, in their breadth of sources searched, and, in the depth of analysis they employed. Even the best of

---

1/ Paper presented at the 1977 Annual Meeting of the American Education Research Association, April 4-8, 1977 in New York City. Copies of this paper may be obtained from the author at ACTION, Division of Evaluation, 806 Connecticut Ave., N.W. Washington, D.C. 20525.

them would today be characterized as methodologically primitive. Nevertheless, these early studies did provide useful guidance to Federal and State education agencies.

Each of the early identification studies conducted between 1965 and 1972 focused on one or more of the following activities: actual identification of successful compensatory education projects, analyses of the characteristics of successful programs, identification of project components that differentiated successful from unsuccessful projects, follow-up of previously identified successes, or analysis of interstudy agreement. Most of the early comprehensive studies included project identification and analyses of successful program characteristic phases (Gordon and Wilkerson, 1966; Hawkridge, Chalupsky, and Roberts, 1968a; Hawkridge, Campeau, DeWitt and Trickett, 1969; Gordon and Kourtrélakos,1971; Wargo, Campeau, and Tallmadge, 1971). Several studies focused on the analysis of previously identified successful programs (Posner, 1968; 1968; McDill, McDill and Sprehe,1969; Bissell, 1970). One study attempted to identify project components that differentiated successful projects from unsuccessful ones (Hawkridge, Tallmadge, and Larson, 1968b). Interstudy agreement on components of success was addressed by McDill et al., (1969) and Wargo, Tallmadge, Michaels, Lipe, and Morris (1972). Only one study attempted to determine if successful programs maintain their status over a period of years (Wargo, et al., 1971). The following will summarize the methods, problems, and findings associated with these early studies.

Identification of Successes and Analysis of their Characteristics

One of the most comprehensive searches for successful compensatory education programs was conducted by Wargo, Campeau, and Tallmadge in 1971. That search will be briefly described since all previous searches were somewhat less sophisticated, used one or more of its methods, were less well documented, yet reached similar conclusions. Wargo and colleagues identified candidate successful projects by conducting a computer search of the Education Resource Information Center (ERIC) data base, by sending inquiries to all State Departments of Education, and by requesting nominations from USOE-supported Research and Development Centers, Regional Education Laboratories, and the National

Laboratory on Early Childhood Education. Nominations were also solicited from professional contacts within and outside USOE. Finally, a search was made at the American Institutes for Research Library, which contains an extensive collection of compensatory education literature.

Well over 1,200 documents related to possibly successful compensatory education projects were identified and reviewed. On the basis of a preliminary analysis of those documents, 422 candidate projects were identified for further review. In terms of productivity, the ERIC search resulted in 38.6% of the candidates. Nineteen percent of the candidates were identified indirectly when several large city school systems responded to inquiries about specific programs with city-wide evaluation reports. Fourteen percent of the candidates were identified by State Departments of Education, and similar percentages were identified on the basis of professional contacts and research at the American Institutes for Research Library. The least productive sources were miscellaneous reports (9.7%; Great Cities School Reports, Technical Assistance Reports, etc.) and USOE-supported Research and Development Centers, Regional Education Laboratories and the National Laboratory on Early Childhood Education (3.8%). While earlier studies that focused on identification of successful compensatory education programs used one or more of the sources described above, none of those studies reported the productivity of their various sources as did Wargo and his colleagues (cf: Gordon and Wilkerson, 1966; Hawkridge, et al. 1968a, Hawkridge, et al. 1969; Gordon and Kourtrelakos, 1971).

Wargo and his associates report that of the 422 candidate projects that they identified, only 77.2% (326) of the projects answered their repeated requests for more detailed evaluation information upon which their successes could be judged. After an in-depth review of the evaluation results associated with each of the 326 remaining projects, 316 were rejected for not meeting minimum standards of evaluation soundness and the criteria of statistically and educationally significant gains. Only 10 (3.1%) of the 326 candidate projects that provided enough information to evaluate their effectiveness were determined to be successful compensatory education programs. Most of the other teams that have been involved in such searches report similarly discouraging results.

Many of the studies that have identified successful compensatory education programs have also attempted to characterize those programs in some way or other. Hawkridge and his colleagues (1968a and 1969) were satisfied with a simple description of the successful projects characteristics, as were Wargo and his

associates (1971). In a summary of those three studies, the characteristics of all 41 successful projects that they identified were analyzed in some detail (Wargo, et al., 1972). In general, it was found that successful programs vary in as many characteristics as their unsuccessful counterparts.

Problems that have been identified by early success searches include poor or nonexistent documentation of project evaluations, methodologically unsound local project evaluations, reluctance on the part of some project directors to assist in-depth reanalysis of their evaluation findings, and difficulty in developing a set of criteria by which projects can be judged as successful or not. As the first problems are resolved by improving methodological rigor and documentation, the third will probably become less prevalent, i.e., project directors will become less reluctant to subject their evaluation findings to reanalysis. Finally, if the methodological rigor of compensatory education project evaluation improves, it is also possible that fewer projects will be rejected from success searches solely on the basis of poor substantiation of their success, as was the case in the past (Wargo et al., 1971).

The fourth problem mentioned above, the criteria problem, is one that continues to plague researchers in this and related areas. Criteria used to define success have ranged from a criterion such as "innovativeness" based on professional educator's judgements, to more objective criteria based upon demonstrated cognitive benefits. Fortunately, the trend has been to rely more and more on objective evidence of cognitive gains. Nevertheless, most investigators have used different sets of criteria. In general, they have agreed that evaluation results must be based upon sound methodology and that differences favoring the treatment group or demonstrated gains within a group must be reliably measured and statistically significant (Hawkridge, et al., 1968a; Hawkridge et al., 1969; Wargo, et al., 1971). Investigators differ, however, as to how much of a gain or difference is a practical or educationally significant difference. Hawkridge and his associates (1968a) have suggested and used a third of a standard deviation gain as a respectable or practical gain in cognitive ability or achievement. Wargo and his colleagues (1971) used achievement or ability test gain greater than expected or observed for average children during a comparable period of time in a regular classroom. More recent investigators have suggested that success should be defined by a maintenance or gain in percentile ranking during the course of treatment. The point is that this problem, unlike others identified by the early investigators, remains to be resolved.

Components of Successful Compensatory Education Projects

In 1968, shortly after completing his initial search for successful compensatory education projects, Hawkridge was asked by the National Advisory Council on the Education of Disadvantaged Children to conduct a study to identify compensatory education project components that were associated with success. Hawkridge, Tallmadge, and Larson (1968b) undertook the study by means of analytic comparisons between a set of successful projects and a set of matched but unsuccessful projects.

On the basis of comparative analysis of 18 successful and 25 matched but unsuccessful projects, 91 treatment components were identified by Hawkridge and his associates. Comparisons between successful and unsuccessful projects in terms of the presence or absence of each of the 91 components were inconclusive. The authors felt, however, that real differences did exist between successful and unsuccessful programs. When they considered qualitative differences as well as the mere presence or absence of components, they found that the following features were more characteristic of successful than of unsuccessful programs at various grade levels:

Preschool Programs

- careful planning, including statement of objectives
- teacher training in the method of the program
- small groups and a high degree of individualization
- instruction and materials closely relevant to the objectives

Elementary School Programs

- academic objectives clearly stated
- active parental involvement, particularly as motivators
- individual attention for pupils' learning problems
- high intensity of treatment

Secondary School Programs

- academic objectives clearly stated
- individualization of instruction
- directly relevant instruction

Hawkridge and his colleagues cautioned that their conclusions necessarily involved elements of subjective judgment. Certainly, the presence of the success-related characteristics could not be taken as a guarantee of effectiveness -- nor would their absence assure failure. They also suggested that a different set of successful and unsuccessful programs could have led them to different conclusions.

Two of the 11 components of success identified by Hawkridge and his colleagues are common across all grade bands, while another was common to two grade levels. Thus there were only six unique components: (1) academic objectives clearly stated and/or careful planning, (2) teacher training in the methods of the project, (3) small-group or individualized instruction, (4) directly relevant instruction, (5) high treatment intensity, and (6) active parental involvement.

In addition to the above cited study, several other pre-1972 studies attempted to identify unique components or characteristics of successful compensatory education projects. Gordon and Wilkerson's study (1966) was one of the earliest endeavors. As part of their attempt to identify successful preschool-through-postsecondary compensatory education projects, they used a somewhat subjective methodology to identify "ideas and practices which show promise."

In 1968 Posner reported an analysis of a small number of "successful" compensatory education projects. He attempted to identify elements that were associated with successful programs. His method consisted of a review of descriptive and evaluative information relating to 15 programs that he considered "successful". On the basis of his analysis he identified several project components that he concluded were associated with success.

McDill, McDill, and Sprehe reported in 1969 another study that attempted to identify those elusive components of successful programs. Their study included an analysis of federally supported programs as well as local-level projects. In addition to evaluating the effectiveness of those programs and projects, they devoted a chapter of their report to a discussion of components associated with successful programs that relied heavily on the Hawkridge et al., (1968b) and Posner (1968) studies described above.

In 1970, Bissell reported a study that focused on successful preschool programs. She reanalyzed the results reported by three earlier studies of preschool programs (DiLorenzo, 1969; Karnes, 1969; Weikart, 1969) in an attempt to determine the average effects of those programs across groups of participating children and the differential effects of those programs on various types of children. On the basis of her analysis, she suggested several project elements that appeared to be associated with success.

Gordon conducted a second review of the compensatory education literature in association with Kourtrelakos (1971). They attempted to determine the relationship between compensatory education project input and output variables. Although an extensive analysis was completed, it proved to be of little value in identifying critical variables and their relationship to success. Nevertheless, on the basis of more subjective analysis, the authors reported several project components associated with success.

Although each of the six studies described above was somewhat subjective in its analysis, the work of Hawkridge and his colleagues (1968b) was apparently least so, due to its use of explicitly stated criteria for project selection and comparative rather than absolute judgments during the component identification process. For those reasons, the Hawkridge components were used by Wargo and his colleagues as a basis for comparative analysis of all six studies referred to above. Their basic methodology consisted of a review and analysis of the five reports mentioned above, in an attempt to determine the amount of agreement between the Hawkridge team and the five other teams of investigators. Wargo and his associates reported some difficulty in conducting the analysis due to the fact that few of the six reviewed studies reported a specific list of components, making it necessary to infer components from narrative statements in the reports.

The following table summarizes the results of the analysis reported by Wargo and his colleagues (1972). The column headings in the table represent the six components of success identified by Hawkridge and his associated (1968b) and a seventh, "structured environment", which was the one component identified by more than one of the six studies but not by Hawkridge and his associates. The row headings refer to the six studies reviewed.

Components of Success
Identified by Six Investigators

Investigator	Objective & Planning	Teacher Training	Relevant Instruction	High Intensity	Parent Involvement	Indiv'lized Instruction	Structured Environment	Sum
Bissell (1970)	+	+				+	+	4
Gordon & Kourtrelakos (1971)	+			+	+	+	+	5
Gordon & Wilkerson (1966)			+	+	+			3
Hawkridge et al.(1968b)	+	+	+	+	+	+		6
McDill et al. (1969)	+	+	+		+	+		5
Posner (1968)	+					+		2
Sum	5	3	3	3	4	5	2	25

Note: The above table does not include ten components which were mentioned only once each by the following authors: Bissel - emphasis on language development, constant supervision of teachers and aides; Gordon & Kourtrelakos - home-based support of learning program, personnel committed to prescribed procedures, provision of immediate feedback, ample teacher planning time; Gordon & Wilkerson - peer teaching and learning, new materials and technology, learning task-specific grouping, and staffing (quantity, expert teachers, paraprofessionals, male models, support staff).

The row sums in the above table indicate that there was considerable agreement among the six studies which attempted to identify project components associated with success. The column sums indicate that a total of five of the six research teams found the two components, "academic objectives clearly stated and/or careful planning" and "small group or individualized instruction', were associated with success in the projects they reviewed. Four of the studies agreed that "active parental involvement" was a component associated with success, and three studies agreed that "teacher training in the methods of the program", "directly relevant instruction", and "high treatment intensity" were often present in successful projects.

All six of the project components that Hawkridge, Tallmadge, and Larson (1968b) initially found to discriminate between matched successful and unsuccessful projects were also identified by two or more studies with similar objectives. Apparently, although those six studies varied in method and rigor, there was considerable agreement that the components identified were associated with success. Even greater credibility is given to those components when one considers the fact that the six studies that independently identified and agreed on those components reviewed and analyzed, for the most part, different projects. Clearly, the components identified in the above table are present in many successful projects, and they have been found to discriminate between successful and unsuccessful endeavors.

Wargo and associates (1972) conducted a further analysis relating to successful project components. They analyzed 21 successful compensatory education projects identified since the Hawkridge component analysis to determine the presence or absence of his six components. The 21 newly identified successes (cf: Hawkridge et al.,1969; Wargo et al., 1971) were analyzed to determine the frequency of occurrence of each of the six Hawkridge components within each project. Wargo and his colleagues' results can be summarized as follows:

Component	Presence in 21 Projects
1. Academic objectives clearly stated and/or careful planning	76%
2. Teacher training in project methods	76%
3. Small group or individualized instruction	86%
4. Directly relevant instruction	66%
5. High treatment intensity	57%
6. Active parental involvement	33%

As indicated above, with the one exception of "active parental involvement", each of the components of success that was found by Hawkridge and his associates to discriminate successful projects from matched unsuccessful projects were found present in 57% or more (57-86%) of the 21 more recently identified successful projects.

What emerges from the above is additional evidence that the six components of success identified by Hawkridge and his associates in 1968 are indeed related to the success of compensatory education projects. Five of the six components were present in 57 - 86% of the newly identified successes. Also at least three independent investigation teams identified each of those components on the basis of an analysis of different sets of successful projects. It should be noted however, that none of the six components was found by any of the investigators to be either necessary or sufficient for success. None of the six components was found in all successful projects and most components were found to be present in unsuccessful as well as successful projects. Although the six components will not guarantee success, they appear to be associated with successful programs and their presence differentiates successful from unsuccessful projects.

The Permanence of Success

To this author's knowledge, during the 1965-72 period covered by this review only one study attempted to determine the permanence of previously identified successful projects. Wargo, Compeau, and Tallmadge (1971) report an attempt to determine the current status of 31 successful compensatory education projects which were identified as successful by Hawkridge and his associates (1968a; 1969) approximately two to three years prior to the followup. Project directors for the 31 successful projects were sent letters asking them (a) if their projects were still in operation, (b) if so, what changes or modifications were made since they were labeled successes by Hawkridge and associates, (c) what if any new evaluation or follow-up data were available, and (d) were they aware of any replications of their projects? When necessary, the letters were followed up by additional mail and phone contacts.

The authors reported that two to three years after the 31 projects were deemed successful, 27 (87.1%) were still in operation. Two of the projects were terminated as planned when grants ran out, one was terminated due to project director retirement, and the fourth was terminated due to lack of continued funding. Nineteen of the original 31 successes reported modifications which in most cases consisted of an expansion or reduction of services with expansions most frequently reported. Almost half of the project directors reported that their programs were being replicated at some other sites. Only 14 of the 27 programs still in operation could provide additional evaluation or follow-up data upon which conclusions about continued successes or sustained effects could be drawn. On the basis of the new

data provided by those 14 projects it was concluded that nine (64%) of them continued to be successful and five (36%) of them were no longer successful. In short, successful as well as unsuccessful projects have some difficulty in obtaining continued funding and are subject to modifications even over a short period of a few years. The question of the permanence of their success is still somewhat open although the above suggests that at least 64% of those that continue self-evaluation maintain their success status.

Policy Implications of Early Studies

The above reviewed studies reported several interesting findings having very specific policy implications for Federal and State education agencies. They drove home the fact that local compensatory education projects tended to conduct relatively unsophisticated self evaluations or none at all. The policy implication of that finding was twofold. First, it suggested that local education agencies should be provided with some form of technical assistance in the area of compensatory education project evaluation. Secondly, it suggested that future attempts to identify successful compensatory education projects should collect their own data using comparable methodology, instruments, data collection procedures, and criteria for success across sites. That those two policy recommendations were taken seriously is attested to by the fact that technical assistance for local evaluation and several in-depth studies of successful or innovative education projects were initiated by USOE shortly after those recommendations were reported. Two of the USOE-supported in-depth studies of compensatory education projects are reported in following papers (cf: Trismen and Wellisch papers).

Another policy implication of the early work was based upon the finding that although local school systems very actively sought any documentation dealing with descriptions of successful compensatory education projects and successful directors reported considerable demand for such information about their projects, little evidence could be found that successful projects were replicated at other unrelated sites (Wargo et al., 1971). The policy implication was that some form of information package was necessary to facilitate local replication of successful projects. Such methodology was suggested to USOE by Wargo and Tallmadge in the form of an unsolicited proposal in 1972. For various reasons that proposal was not funded. However, early in 1973 USOE began such a packaging effort, the results of which are described in Dr. Horst's paper.

In summary, this brief review of early attempts to identify unusually successful compensatory education projects and components of those projects that differentiate success from failure has demonstrated that while early studies were relatively unsophisticated methodologically, they did provide a stable foundation upon which latter work could be based. Early investigators identified and grappled with many of the same issues that are addressed in the following papers. Perhaps the greatest impact of the reviewed studies was that they provided policy guidance to USOE which resulted in an advancement in the state-of-the-art as is witnessed by the following papers.

References

Bissell, J.S. The cognitive effects of pre-school programs for disadvantaged children. Washington, D.C.: National Institute of Child Health and Human Development, June, 1970.

DiLorenzo, L. Pre-kindergarten programs for educationally disadvantaged children. Albany, N.Y: N.Y. State Dept. of Ed., Dec., 1969.

Gordon, E.W. and Kourtrelakos, J. Utilizing available information from compensatory education and surveys. New York: Teaching and Learning Research Corporation, June, 1971.

Gordon, E.W. and Wilkerson, D.A. Compensatory education for the disadvantaged. Programs and practices: Preschool through college. New York: College Entrance Examination Board, 1966.

Hawkridge, D.G. Campeau, P.L., DeWitt, K.M., and Trickett, P.K. A study of further selected exemplary programs for the education of disadvantaged children. Palo Alto, Calif.: American Institutes for Research, June, 1969.

Hawkridge, D.G., Chalupsky, A.B., and Roberts, A.O.H. A study of selected exemplary programs for the education of disadvantaged children. Palo Alto, Calif.: American Institutes for Research, September, 1968a.

Hawkridge, D.G., Tallmadge, G.K. and Larsen, J.K. Foundations for success in educating disadvantaged children. Palo Alto, Calif.: American Institutes for Research, December, 1968b.

Karnes, M.B. Research and development program on preschool disadvantaged children. Urbana, Ill.: University of Illinois, Institute for Research on Exceptional Children, May, 1969.

McDill, E.L., McDill, M.S. and Sprehe, J.T. Strategies for success in compensatory education: An appraisal of evaluation research. Baltimore: Johns Hopkins Press, 1969.

Posner, J. Evaluation of "successful" pre-Title I projects in compensatory education. Draft. Office of Program Planning and Evaluation, Occassional Paper #8. Washington, D.C.: U.S. Department of Health, Education, and Welfare, April, 1968.

Wargo, M.J., Campeau, P.L. and Tallmadge, G.K., Further examination of exemplary programs for educating disadvantaged children. Palo Alto, Calif.: American Institutes for Research, July, 1971.

Wargo, M.J., Tallmadge, G.D., Michaels, D.D., Lippey, D. and Morris, S.J. ESEA Title I: A reanalysis and synthesis of evaluation data from fiscal year 1965 through 1970. Palo Alto, Calif.: American Institutes for Research, March, 1972.

Weikart, D. A comparative study of three preschool curricula. Paper presented at the Society for Research in Child Development meeting in Santa Monica, Calif., 1969.